

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional) 84495US1	
		Application Number 10/673352-Conf. #8469	Filed September 30, 2003
		First Named Inventor Lee Johnson	
		Art Unit 1744	Examiner N. Bowers
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p><input type="checkbox"/> applicant /inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input type="checkbox"/> attorney or agent of record. Registration number _____</p> <p><input checked="" type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. <u>43,369</u></p> </div> <div style="width: 50%; text-align: right;"> <p>_____ /Thomas D. Robbins/ Signature</p> <p>_____ Thomas D. Robbins Typed or printed name</p> <p>_____ (202) 404-1553 Telephone number</p> <p>_____ April 17, 2007 Date</p> </div> </div> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below".</p>			
<input type="checkbox"/> *Total of <u>1</u> forms are submitted.			

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : Lee Johnson, et al.
Serial Number : 10/673352 Examiner: N. Bowers
Filed : September 30, 2003 Group Art Unit 1744
For : MICROELECTRONIC CELL
ELECTROPORATION ARRAY

ATTACHMENT TO PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner of Patent and Trademarks
Washington, D.C. 20231

Sir:

Applicants request that the Pre-Appeal examining group decide the following three issues:

Issue 1: Do claims 24 and 27 comply with 35 U.S.C. § 112, first paragraph?

Issue 2: Does claim 21 comply with 35 U.S.C. § 112, second paragraph?

Issue 3: Is claim 21 (and therefore are dependent claims 22-27) patentable over the cited prior art?

Issue 1

It is respectfully submitted that claims 24 and 27 comply with 35 U.S.C. § 112, first paragraph, and it is respectfully requested that the outstanding rejection under 35 U.S.C. § 112, first paragraph be withdrawn.

Paragraph 1 of the final Office action (Office action) dated March 22, 2007, asserts that the “specification does not describe an embodiment in which only a single cathode or a single anode used [sic].” The Office action then further asserts that the “entirety of the written description and drawing point only to examples in which a plurality of cathodes and a plurality of anodes are utilized.”

Both of the above-discussed assertions are incorrect. Applicants respectfully point out that lines 6-14 of paragraph [0031] of the substitute specification filed January 18, 2007, clearly state many embodiments that include a single electrode of one type and a plurality of electrodes of another type. For example, as illustrated in FIG. 5B, “one unit cell is the cathode 503 and 8 others are used as the anode 504.” Further, as illustrated in FIG. 5D, “a unit cell is used as the cathode 507 and the top of the chamber is used as the anode 508.” As further described in lines 12-14 of paragraph [0031], a “unit cell or a group of unit cells would be activated to act as either the cathode or the anode and the large plate would be activated to be the opposing electrode.”

In light of the above discussion, it is clear that claims 24 and 27 comply with 35 U.S.C. § 112, first paragraph, and it is respectfully requested that the outstanding rejection under 35 U.S.C. § 112, first paragraph be withdrawn.

Issue 2

It is respectfully submitted that claim 21 complies with 35 U.S.C. § 112, second paragraph, and it is respectfully requested that the outstanding rejection under 35 U.S.C. § 112, second paragraph be withdrawn.

Paragraph 2 of the Office action indicates that lines “10-13 state that the at least one anode comprises only a single anode, but then later state that the at least one anode comprises more than one anode.” The cited portion of the Office action further indicates that “it is uncertain whether a plurality of anodes/cathodes or a singular anode/cathode is claimed.”

It is respectfully submitted that claim 21 clearly recites in lines 10-11 that “when said at least one anode comprises only a single anode, said at least one cathode comprises more than one cathode.” Further, claim 21 clearly recites in lines 12-13 that “when said at least one cathode comprises only a single cathode, said at least one anode comprises more than one anode.” It is clear that the scope of the invention recited in claim 21 includes instances wherein there is a single anode and instances wherein there is a single cathode. In the instances that there is a single cathode, it is clear that the scope of the invention recited in claim 21 requires more than one anode. Similarly, in the instances that there is a single anode, it is clear that the scope of the

invention recited in claim 21 requires more than one cathode. This subject matter is supported, for example, with reference to lines 6-14 of paragraph [0031] of the substitute specification filed January 18, 2007, wherein many embodiments include a single electrode of one type and a plurality of electrodes of another type.

In light of the above discussion, it is respectfully submitted that claim 21 complies with 35 U.S.C. § 112, second paragraph, and it is respectfully requested that the outstanding rejection under 35 U.S.C. § 112, second paragraph be withdrawn.

Issue 3

It is respectfully submitted that independent claim 21 and dependent claims 22-27 are patentable over the cited prior art, and it is respectfully requested that the outstanding rejections under 35 U.S.C. §§ 102 and 103 be withdrawn.

As illustrated in FIGs. 3A-3E, and as described in the specification as filed, for example on page 9, a plurality of substances can be loaded into specifically targeted and spatially varied cells. The present invention enables such a feature as a result of the chamber that accepts the fluid, and the conducting portion. Specifically, the chamber is disposed such that when the fluid is in the chamber, the fluid is in contact with the cells. Further, the conducting portion is disposed to receive a layer of the cells and is operable to pass spatially variant voltages to targeted cells for electroporation. Once the targeted cells have been electroporated, the chamber may be emptied and then refilled with a new fluid. This feature is recited in independent claim 21.

Independent claim 21 recites, *inter alia*, the conducting portion is disposed such that the second side is disposed between the first side and the fluid when the fluid is received in said fluid chamber, and wherein, when the second side has the layer of the plurality of objects thereon, **when the fluid is in said fluid chamber and when the voltage source provides voltage to said stimulator array, said stimulator array is operable to generate spatially variant voltages to said conducting portion to enable the substance to pass through membranes of a spatially variant portion of the plurality of objects via electroporation.**

It is clear from the language of the claim that the recited structure (including the recited spatial relationship between the recited elements) gives rise to recited function. As described on page 6 of the response filed January 18, 2007, Hoff fails to disclose the above-identified limitations.

Paragraph 3 of the Office action fails to address the above-identified limitations. Page 8 of the Office action indicates that it “is not understood why Applicant does not consider the electrodes of Hoff to be legitimate ‘conducting portions’ because the electrodes are in direct contact with the cells.” Applicants have not argued whether the electrodes of Hoff are “legitimate” conducting portions. Nevertheless, it is clear that the recited relationship between the recited fluid chamber, the stimulator array and the conducting portion of claim 21 is not disclosed in Hoff.

Hoff fails to disclose the explicitly recited structure that includes functional recitations of the elements, i.e., the conducting portion is disposed such that the second side is disposed between the first side and the fluid when the fluid is received in said fluid chamber, and wherein, when the second side has the layer of the plurality of objects thereon, **when the fluid is in said fluid chamber** and when the voltage source provides voltage to said stimulator array, **said stimulator array is operable to generate spatially variant voltages to said conducting portion to enable the substance to pass through membranes of a spatially variant portion of the plurality of objects via electroporation.**

Claim 21 requires the stimulator array to be able to pass the fluid through a membrane when the fluid is in the fluid chamber. First of all, the Office action fails to point out a disclosure of a stimulator array in Hoff. In the event that one of microplungers 18 of Hoff is considered a fluid chamber as recited in claim 21, when the fluid is in the microplunger 18, an unidentified stimulator array would be unable to enable the fluid to pass through membranes. Accordingly, Hoff fails to disclose that which is recited in claim 21.

In light of the above, it is clear that Hoff fails to anticipate independent claim 21 within the meaning of 35 U.S.C. § 102(e).

As discussed on pages 7 and 8 of the Amendment filed January 18, 2007, Nicoletis, Dzekunov, and Merritt fail to disclose the shortcomings of Hoff such that a combination of Hoff, Nicoletis, Dzekunov and Merritt would suggest that which is recited in independent claim 21. Therefore, claim 21 is patentable over a combination of Hoff, Nicoletis, Dzekunov and Merritt within the meaning of 35 U.S.C. §103. Further, claims 22-27 are dependent upon claim 21 and therefore include all the limitations thereof. For at least this reason, claims 22-27 are additionally patentable over a combination of Hoff, Nicoletis, Dzekunov and Merritt within the meaning of 35 U.S.C. §103

In light of the above, it is respectfully submitted that independent claim 21 and dependent claims 22-27 are patentable over the cited prior art, and it is respectfully requested that the outstanding rejections under 35 U.S.C. §§ 102 and 103 be withdrawn.

If there are any outstanding issues that can be resolved by telephone interview, the examiner is asked to call the Applicants' attorney Thomas D. Robbins at 202-404-1553.

Kindly charge any additional fees due or credit overpayment of fees to Deposit Account Number 50-0281.

Respectfully submitted,

/Thomas D. Robbins/
Thomas D. Robbins
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Associate Counsel (Patents)
April 17, 2007